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tgcgtcgctt tgccctggaa cacgaggcct cggacttggt ggagatctac ctctggaagc 1500
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gcacagcact teegactget egetggeece caegaaggte actggaaegt etteetagee 1680
cagaccctgg agctgaaggt cacggccagt ccagacaaag tgaccaagac ataacaaaga 1740
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ttgcataacc atcaaaa
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<213> Homo sapiens
<400> 9
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ttaccctctc tgggcctcat ttgtctaatc ataataatta acgctgatac catgatataa 180
atctgtacag catttcactg cttgattccc taactgccct gtgagataag cgttaaggct 240
cagagacagt ggcatgccca gtgttgcaca gtaagtgtgt ggtaaagccg agattcaaac 300
tcagaccttc tggccccttg cctaggagag catgcccagt tgtctagcag attctctttt 360
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qcctgaqtqq cccagatqac atctctttta gaqctagaaa gaaggagaaa tgagacaggg 420 tctttgggct ggagcctcct gggactaaca tggcactggt cggtttgcca ggcccagaca 480 tgttctgcct tttccatggg aagagatact cccccggcga gagctggcac ccctacttgg 540 'agccacaagg cotgatgtac tgootgogot gtacotgoto agagggogoo catgtgagtt 600 gttaccgcct ccactgtccg cctgtccact gcccccagcc tgtgacggag ccacagcaat 660 qctqtcccaa qtqtqtqqaa cctcacactc cctctqgact ccgggcccca ccaaagtcct 720 gccagcacaa cgggaccatg taccaacacg gagagatett cagtgcccat gagetgttcc 780 cctcccgcct gcccaaccag tgtgtcctct gcagctgcac agagggccag atctactgcg 840 geeteacaae etgeecegaa ecaggetgee eageaceeet ecegetgeea gaeteetget 900 qccaaqcctq caaaqatqaq qcaaqtqaqc aatcqqatqa aqaqqacagt qtqcaqtcqc 960 tccatqqqqt qaqacatcct caqqatccat qttccaqtqa tqctqqqaqa aaqaqaqqcc 1020 egggeacce ageceecact ggeeteageg eccetetgag etteateect egecacttea 1080 gacccaaggg agcaggcagc acaactgtca agatcgtcct gaaggagaaa cataagaaag 1140 aggacaaagc agaccetgge cacagtgaga teagttetac caggtgteec aaggeaeegg 1200 qccqqqtcct cqtccacaca tcqqtatccc caaqcccaqa caacctgcgt cqctttgccc 1260 tqqaacacqa qqcctcqqac ttqqtqqaqa tctacctctq qaaqctqgta aaaqatqagg 1320 aaactgaggc tcagagaggt gaagtacctg gcccaaggcc acacagccag aatcttccac 1380 ttgactcaga tcaagaaagt caggaagcaa gacttccaga aagaggcaca gcacttccga 1440 ctgctcqctq gccccacqa aggtcactqq aacgtcttcc tagcccagac cctggagctg 1500 aaggtcacgg ccagtccaga caaagtgacc aagacataac aaagacctaa cagttgcaga 1560 tatgagetgt ataattgttg ttattatata ttaataaata agaagttgca taaccatcaa 1620

<210> 10 <211> 1567 <212> DNA <213> Homo sapiens

<400> 10

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<210> 11
`<211> 1202
<212> DNA
<213> Mouse
<220>
<221> UNSURE
<222> (1)..(1202)
\langle 223 \rangle n = a,c,q,t any unknown or other
<400> 11
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aagccctgga ggctggcttg ccaaatcctt gtcagtgtnt ttattgatta gtctgagaat 120
atcttagacc tcacccacaa ggttctgtgt ggagcctgtg ctctctgtct gtctgtctgt 180
ctgtctgtct gtctgtctgt ctgcctgcct ctctctgtct gtctccgtct gtctctgtct 240
ctctgtctgt ctctttctct ctgtctctct ctgtgtctct gtctctgtct 300
ctgtctctct ctctctca gaagtcctct agccttctct agcaggcgtc tcatgcagcc 360
tggttggtgt tcccagctgt ggcctatccc acagacagct ccacatcctg cttgctgttc 420
gcagagacat teceaggate catgetegga gaggagagge cecageaege cageeeceae 480
cagecteage teceetetgg getteateen tegecaette cagteagtag gaatgggeag 540
cacaaccatc aagattatct tgaaggagaa acataaaaaa gcttgcacac acaatgggaa 600
gacatactcc catggggagg tgtggcaccc cattgtgctc tcctttggcc ccatgccctg 660
catectgtgc acatgtattg atggetacca ggactgccac cgtgtgacct gccccaccca 720
atatecetge agteaaceca agaaagtgge tgggaagtge tgcaagatet geecagagga 780
cgaggcggaa gatgaccaca gtgaggtcat ttccacccgg tgtcccaagg taccaggcca 840
qttccaqqtq tacacqttqq catctccaag cccagacagc ctacaccgct ttgtcctgga 900
gcatgaagcc tctgaccagg tagagatgta catttggaag ctggtgaaag gaatttacca 960
cttggttcag atcaagagag tcaggaagca agatttccag aaagaggttc agaacttccg 1020
gctgctcacc ggcacccatg aaggttactg gaccgttttc ctagcccaga ttccagagct 1080
qaaaqttaca qccaqcccaq acaaaqtgac caaqacatta tagcaaggac ctaaagagtt 1140
gcagatacga gttttattgg ttttgttatt atatattaat aaagaagtcg cattaccctt 1200
                                                                   1202
t.c
<210> 12
<211> 398
<212> PRT
<213> Homo sapiens
<220>
<221> UNSURE
<222> (1)..(398)
<223> Xaa = any amino acid, unknown or other
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Gly Ala His Val Ser Cys Tyr Arg Leu His Cys Pro Pro Val His Cys
             20
                                  25
Pro Gln Pro Val Thr Glu Pro Gln Gln Cys Cys Pro Lys Cys Val Glu
Pro His Thr Pro Ser Gly Leu Arg Ala Pro Pro Lys Ser Cys Gln His
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As	n	Gly	Thr	Met	Tyr	Gln	His	Gly	Glu	Ile	Phe	Ser	Ala

55

60

50

la His Glu Leu 70 75 65 Phe Pro Ser Arg Leu Pro Asn Gln Cys Val Leu Cys Ser Cys Thr Glu 90 Gly Gln Ile Tyr Cys Gly Leu Thr Thr Cys Pro Glu Pro Gly Cys Pro 100 105 Ala Pro Leu Pro Leu Pro Asp Ser Cys Cys Gln Ala Cys Lys Asp Glu 120 Ala Ser Glu Gln Ser Asp Glu Glu Asp Ser Val Gln Ser Leu His Gly 135 Val Arg His Pro Gln Asp Pro Cys Ser Ser Asp Ala Gly Arg Lys Arg 150 145 Gly Pro Gly Thr Pro Ala Pro Thr Gly Leu Ser Ala Pro Leu Ser Phe 170 Ile Pro Arg His Phe Arg Pro Lys Gly Ala Gly Ser Thr Thr Val Lys 180 185 190 Ile Val Leu Lys Glu Lys His Xaa Lys Ala Cys Val His Gly Gly Lys 200 Thr Tyr Ser His Gly Glu Val Trp His Pro Ala Phe Arg Ala Phe Gly 215 Pro Cys Pro Cys Ile Leu Cys Thr Cys Glu Asp Gly Arg Gln Asp Cys 2.35 Gln Arg Val Thr Cys Pro Thr Lys Tyr Pro Cys Arg His Pro Glu Lys 250 Val Ala Gly Lys Cys Cys Lys Ile Cys Pro Glu Asp Lys Ala Asp Pro 265 Gly His Ser Glu Ile Ser Ser Thr Arg Cys Pro Lys Ala Pro Gly Arg Val Leu Val His Thr Ser Val Ser Pro Ser Pro Asp Asn Leu Arg Arg 295 Phe Ala Leu Glu His Glu Ala Ser Asp Leu Val Glu Ile Tyr Leu Trp 305 315 Lys Leu Val Lys Asp Glu Glu Thr Glu Ala Gln Arg Gly Glu Val Pro 325 330 Gly Pro Arg Pro His Ser Gln Asn Phe His Leu Thr Gln Ile Lys Lys 345

Val Arg Lys Gln Asp Phe Gln Lys Glu Ala Gln His Phe Arg Leu Leu

355 360 365

Ala Gly Pro His Glu Gly His Trp Asn Val Phe Leu Ala Gln Thr Leu 370 375 380

Glu Leu Lys Val Thr Ala Ser Pro Asp Lys Val Thr Lys Thr 385 390 395

<210> 13

<211> 539

<212> PRT

<213> Homo sapiens

<220>

<221> UNSURE

<222> (1)..(539)

<223> Xaa = any amino acid, unknown or other

<400> 13

Ser Pro Leu Pro Ser Ala Gly Pro Ser Phe Val Ser Pro Ser Leu Pro 1 5 10 15

Pro Phe Pro Ala Phe Ser Phe His Leu Ser Leu Leu Pro Thr Leu Asp 20 25 30

Leu Pro Ser Cys Pro Pro Phe Leu Pro Thr Ala Ala Ser Trp Pro Phe 35 40 45

Ser Asp Pro Ala Leu Ala Ala Asp Leu Leu Gly Ser Cys Gly Leu Ile 50 55 60

Cys Gly Pro Cys Xaa Ser Val Ser Phe Ser Ser Pro Val Leu Pro Thr
65 70 75 80

Pro Leu Pro Asp Gln Arg Pro Asp Pro Gly Glu Arg Met Val Pro Glu 85 90 95

Val Arg Val Leu Ser Ser Leu Leu Gly Leu Ala Leu Leu Trp Phe Pro 100 105 110

Leu Asp Ser His Ala Arg Ala Arg Pro Asp Met Phe Cys Leu Phe His 115 120 125

Gly Lys Arg Tyr Ser Pro Gly Glu Ser Trp His Pro Tyr Leu Glu Pro 130 135 140

Gln Gly Leu Met Tyr Cys Leu Arg Cys Thr Cys Ser Glu Gly Ala His 145 150 155 160

Val Ser Cys Tyr Arg Leu His Cys Pro Pro Val His Cys Pro Gln Pro 165 170 175

Val Thr Glu Pro Gln Gln Cys Cys Pro Lys Cys Val Glu Pro His Thr 180 185 190

Pro Ser Gly Leu Arg Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr

.Met	-			_		Ile 215		Ser			Glu 220	Leu	Phe	Pro	Ser
Λrα	T OU	Dro	Λαρ	Cln	Cuc	Wa l	Lou	Cvc	Sor	Cuc	Thr	Clu	Clu	Gln	Tla

205

200

195

Arg Leu Pro Asn Gln Cys Val Leu Cys Ser Cys Thr Glu Gly Gln Ile
225 230 235 240

Tyr Cys Gly Leu Thr Thr Cys Pro Glu Pro Gly Cys Pro Ala Pro Leu 245 250 255

Pro Leu Pro Asp Ser Cys Cys Gln Ala Cys Lys Asp Glu Ala Ser Glu 260 265 270

Gln Ser Asp Glu Glu Asp Ser Val Gln Ser Leu His Gly Val Arg His 275 280 285

Pro Gln Asp Pro Cys Ser Ser Asp Ala Gly Arg Lys Arg Gly Pro Gly 290 295 300

Thr Pro Ala Pro Thr Gly Leu Ser Ala Pro Leu Ser Phe Ile Pro Arg 305 310 315 320

His Phe Arg Pro Lys Gly Ala Gly Ser Thr Thr Val Lys Ile Val Leu 325 330 335

Lys Glu Lys His Xaa Lys Ala Cys Val His Gly Gly Lys Thr Tyr Ser 340 345 350

His Gly Glu Val Trp His Pro Ala Phe Arg Ala Phe Gly Pro Cys Pro 355 360 365

Cys Ile Leu Cys Thr Cys Glu Asp Gly Arg Gln Asp Cys Gln Arg Val 370 375 380

Thr Cys Pro Thr Lys Tyr Pro Cys Arg His Pro Glu Lys Val Ala Gly 385 390 395 400

Lys Cys Cys Lys Ile Cys Pro Glu Asp Lys Ala Asp Pro Gly His Ser 405 410 415

Glu Ile Ser Ser Thr Arg Cys Pro Lys Ala Pro Gly Arg Val Leu Val 420 425 430

His Thr Ser Val Ser Pro Ser Pro Asp Asn Leu Arg Arg Phe Ala Leu 435 440 445

Glu His Glu Ala Ser Asp Leu Val Glu Ile Tyr Leu Trp Lys Leu Val 450 455 460

Lys Asp Glu Glu Thr Glu Ala Gln Arg Gly Glu Val Pro Gly Pro Arg 465 470 475 480

Pro His Ser Gln Asn Phe His Leu Thr Gln Ile Lys Lys Val Arg Lys
485 490 495

Gln Asp Phe Gln Lys Glu Ala Gln His Phe Arg Leu Leu Ala Gly Pro

500 505 510

His Glu Gly His Trp Asn Val Phe Leu Ala Gln Thr Leu Glu Leu Lys 515 520 525

Val Thr Ala Ser Pro Asp Lys Val Thr Lys Thr 530 535

<210> 14

<211> 388

<212> PRT

<213> Homo sapiens

<220>

<221> UNSURE

<222> (1)..(388)

<223> Xaa = any amino acid, unknown or other

<400> 14

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Asn Phe Ser Lys Asp Ser His Glu Thr Ser Phe Ser Ser Ser Cys
20 25 30

Pro Ser Pro Thr Val Glu Pro His Thr Pro Ser Gly Leu Arg Ala Pro 35 40 45

Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His Gly Glu Ile 50 55 60

Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro Asn Gln Cys Val 65 70 75 80

Leu Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys Gly Leu Thr Thr Cys
85 90 95

Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro Leu Pro Asp Ser Cys Cys 100 105 110

Gln Ala Cys Lys Asp Glu Ala Ser Glu Gln Ser Asp Glu Glu Asp Ser 115 120 125

Val Gln Ser Leu His Gly Val Arg His Pro Gln Asp Pro Cys Ser Ser 130 135 140

Asp Ala Gly Arg Lys Arg Gly Pro Gly Thr Pro Ala Pro Thr Gly Leu 145 150 155 160

Ser Ala Pro Leu Ser Phe Ile Pro Arg His Phe Arg Pro Lys Gly Ala 165 170 175

Gly Ser Thr Thr Val Lys Ile Val Leu Lys Glu Lys His Xaa Lys Ala 180 185 190

Cys Val His Gly Gly Lys Thr Tyr Ser His Gly Glu Val Trp His Pro

195 200 205

Ala Phe Arg Ala Phe Gly Pro Cys Pro Cys Ile Leu Cys Thr Cys Glu 210 215 220

Asp Gly Arg Gln Asp Cys Gln Arg Val Thr Cys Pro Thr Lys Tyr Pro 225 230 235 240

Cys Arg His Pro Glu Lys Val Ala Gly Lys Cys Cys Lys Ile Cys Pro 245 250 255

Glu Asp Lys Ala Asp Pro Gly His Ser Glu Ile Ser Ser Thr Arg Cys 260 265 270

Pro Lys Ala Pro Gly Arg Val Leu Val His Thr Ser Val Ser Pro Ser 275 280 285

Pro Asp Asn Leu Arg Arg Phe Ala Leu Glu His Glu Ala Ser Asp Leu 290 295 300

Val Glu Ile Tyr Leu Trp Lys Leu Val Lys Asp Glu Glu Thr Glu Ala 305 310 315 320

Gln Arg Gly Glu Val Pro Gly Pro Arg Pro His Ser Gln Asn Phe His 325 330 335

Leu Thr Gln Ile Lys Lys Val Arg Lys Gln Asp Phe Gln Lys Glu Ala 340 345 350

Gln His Phe Arg Leu Leu Ala Gly Pro His Glu Gly His Trp Asn Val 355 360 365

Phe Leu Ala Gln Thr Leu Glu Leu Lys Val Thr Ala Ser Pro Asp Lys 370 375 380

Val Thr Lys Thr 385

<210> 15

<211> 439

<212> PRT

<213> Homo sapiens

<220>

<221> UNSURE

<222> (1)..(439)

<223> Xaa = any amino acid, unknown or other

<400> 15

Asp Arg Val Phe Gly Leu Glu Pro Pro Gly Thr Asn Met Ala Leu Val 1 5 10 15

Gly Leu Pro Gly Pro Asp Met Phe Cys Leu Phe His Gly Lys Arg Tyr 20 25 30

Ser Pro Gly Glu Ser Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met

35 40 45

Tyr	Cys 50	Leu	Arg	Cys	Thr	Cys 55	Ser	Glu	Gly	Ala	His 60	Val	Ser	Cys	Tyr
Arg 65	Leu	His	Cys	Pro	Pro 70	Val	His	Cys	Pro	Gln 75	Pro	Val	Thr	Glu	Pro 80
Gln	Gln	Cys	Cys	Pro 85	Lys	Cys	Val	Glu	Pro 90	His	Thr	Pro	Ser	Gly 95	Leu
Arg	Ala	Pro	Pro 100	Lys	Ser	Cys	Gln	His 105	Asn	Gly	Thr	Met	Tyr 110	Gln	His
Gly	Glu	Ile 115	Phe	Ser	Ala	His	Glu 120	Leu	Phe	Pro	Ser	Arg 125	Leu	Pro	Asn
Gln	Cys 130	Val	Leu	Cys	Ser	Cys 135	Thr	Glu	Gly	Gln	Ile 140	Tyr	Cys	Gly	Leu
Thr 145	Thr	Cys	Pro	Glu	Pro 150	Gly	Cys	Pro	Ala	Pro 155	Leu	Pro	Leu	Pro	Asp 160
Ser	Cys	Cys	Gln	Ala 165	Cys	Lys	Asp	Glu	Ala 170	Ser	Glu	Gln	Ser	Asp 175	Glu
Glu	Asp	Ser	Val 180	Gln	Ser	Leu	His	Gly 185	Val	Arg	His	Pro	Gln 190	Asp	Pro
Cys	Ser	Ser 195	Asp	Ala	Gly	Arg	Lys 200	Arg	Gly	Pro	Gly	Thr 205	Pro	Ala	Pro
Thr	Gly 210	Leu	Ser	Ala	Pro	Leu 215	Ser	Phe	Ile	Pro	Arg 220	His	Phe	Arg	Pro
Lys 225	Gly	Ala	Gly	Ser	Thr 230	Thr	Val	Lys	Ile	Val 235	Leu	Lys	Glu	Lys	His 240
Xaa	Lys	Ala	Cys	Val 245	His	Gly	Gly	Lys	Thr 250	Tyr	Ser	His	Gly	Glu 255	Val
Trp	His	Pro	Ala 260	Phe	Arg	Ala	Phe	Gly 265	Pro	Cys	Pro	Cys	Ile 270	Leu	Cys
Thr	Cys	Glu 275	Asp	Gly	Aŗg	Gln	Asp 280	Cys	Gln	Arg	Val	Thr 285	Cys	Pro	Thr
Lys	Tyr 290	Pro	Cys	Arg	His	Pro 295	Glu	Lys	Val	Ala	Gly 300	Lys	Cys	Cys	Lys
Ile 305	Cys	Pro	Glu	Asp	Lys 310	Ala	Asp	Pro	Gly	His 315	Ser	Glu	Ile	Ser	Ser 320
Thr	Arg	Cys	Pro	Lys 325	Ala	Pro	Gly	Arg	Val 330	Leu	Val	His	Thr	Ser 335	Val
Ser	Pro	Sar	Pro	Asn	Asn	T.e.u	Ara	Ara	Phe	د ۵۱	T.e.ii	Glu	His	Glu	Ala

340 345 350

Ser Asp Leu Val Glu Ile Tyr Leu Trp Lys Leu Val Lys Asp Glu Glu 355 360 365

Thr Glu Ala Gln Arg Gly Glu Val Pro Gly Pro Arg Pro His Ser Gln 370 375 380

Asn Phe His Leu Thr Gln Ile Lys Lys Val Arg Lys Gln Asp Phe Gln 385 390 395 400

Lys Glu Ala Gln His Phe Arg Leu Leu Ala Gly Pro His Glu Gly His
405 410 415

Trp Asn Val Phe Leu Ala Gln Thr Leu Glu Leu Lys Val Thr Ala Ser 420 425 430

Pro Asp Lys Val Thr Lys Thr 435

<210> 16

<211> 549

<212> PRT

<213> Homo sapiens

<400> 16

Thr Phe Pro Leu Ser Leu Ile Ala Ser Pro Phe Cys Trp Thr Phe Leu
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Arg Leu Ser Ile Ser Pro Ser Phe Pro Arg Val Leu Phe Pro Pro Phe 20 25 30

Ser Ser Ser His Leu Arg Pro Pro Phe Leu Pro Ser Phe Pro Ala His
35 40 45

Arg Cys Phe Leu Ala Leu Leu Arg Pro Arg Ser Ser Ser Arg Pro Pro 50 55 60

Gly Val Cys Gly Leu Ile Cys Gly Pro Cys Ala Ser Val Ser Phe Ser 65 70 75 80

Ser Pro Phe Leu Pro Thr Pro Leu Pro Asp Gln Arg Pro Asp Pro Gly
85 90 95

Glu Arg Met Val Pro Glu Val Arg Val Leu Ser Ser Leu Leu Gly Leu
100 105 110

Ala Leu Leu Trp Phe Pro Leu Asp Ser His Ala Arg Ala Arg Pro Asp 115 120 125

Met Phe Cys Leu Phe His Gly Lys Arg Tyr Ser Pro Gly Glu Ser Trp 130 135 140

His Pro Tyr Leu Glu Pro Gln Gly Leu Met Tyr Cys Leu Arg Cys Thr 145 150 155 160

Cys Ser Glu Gly Ala His Val Ser Cys Tyr Arg Leu His Cys Pro Pro 170 'Val His Cys Pro Gln Pro Val Thr Glu Pro Gln Gln Cys Cys Pro Lys 180 185 Cys Val Glu Pro His Thr Pro Ser Gly Leu Arg Ala Pro Pro Lys Ser 200 Cys Gln His Asn Gly Thr Met Tyr Gln His Gly Glu Ile Phe Ser Ala 215 His Glu Leu Phe Pro Ser Arg Leu Pro Asn Gln Cys Val Leu Cys Ser 230 235 Cys Thr Glu Gly Gln Ile Tyr Cys Gly Leu Thr Thr Cys Pro Glu Pro 250 245 Gly Cys Pro Ala Pro Leu Pro Leu Pro Asp Ser Cys Cys Gln Ala Cys 265 Lys Asp Glu Ala Ser Glu Gln Ser Asp Glu Glu Asp Arg Val Gln Ser 280 Leu His Gly Val Arq His Pro Gln Asp Pro Cys Ser Ser Asp Ala Gly Arg Lys Arg Gly Pro Gly Thr Pro Ala Pro Thr Gly Leu Ser Ala Pro 310 315 Leu Ser Phe Ile Pro Arg His Phe Ile Pro Lys Gly Ala Gly Ser Thr 325 330 Thr Val Lys Ile Val Leu Lys Glu Lys His Lys Lys Ala Cys Val His 345 Gly Gly Lys Thr Tyr Ser His Gly Glu Val Trp His Pro Ala Phe Arg 360 355 Ala Phe Gly Pro Leu Pro Cys Ile Leu Cys Thr Cys Glu Asp Gly Arg Gln Asp Cys Gln Arg Val Thr Cys Pro Thr Glu Tyr Pro Cys Arg His 390 Pro Glu Lys Val Ala Gly Lys Cys Cys Lys Ile Cys Pro Glu Asp Lys Ala Asp Pro Gly His Ser Glu Ile Ser Ser Thr Arg Cys Pro Lys Ala Pro Gly Arg Val Leu Val His Thr Ser Val Ser Pro Ser Pro Asp Asn 440 445 Leu Arg Arg Phe Ala Leu Glu His Glu Ala Ser Asp Leu Val Glu Ile 455 460

Tyr Leu Trp Lys Leu Val Lys Asp Glu Glu Thr Glu Ala Gln Arg Gly 470 475 `Glu Val Pro Gly Pro Arg Pro His Ser Gln Asn Leu Pro Leu Asp Ser 490 Asp Gln Glu Ser Gln Glu Ala Arg Leu Pro Glu Arg Gly Thr Ala Leu 505 Pro Thr Ala Arg Trp Pro Pro Arg Arg Ser Leu Glu Arg Leu Pro Ser 520 Pro Asp Pro Gly Ala Glu Gly His Gly Gln Ser Arg Gln Ser Asp Gln Asp Ile Thr Lys Thr 545 <210> 17 <211> 549 <212> PRT <213> Homo sapiens <400> 17 Thr Phe Pro Leu Ser Leu Ile Ala Ser Pro Phe Cys Trp Thr Phe Leu 5 Arg Leu Ser Ile Ser Pro Ser Phe Pro Arg Val Leu Phe Pro Pro Phe 25 Ser Ser Ser His Leu Arg Pro Pro Phe Leu Pro Ser Phe Pro Ala His 40 Arg Cys Phe Leu Ala Leu Leu Arg Pro Arg Ser Ser Arg Pro Pro 50 Gly Val Cys Gly Leu Ile Cys Gly Pro Cys Ala Ser Val Ser Phe Ser 70 Ser Pro Phe Leu Pro Thr Pro Leu Pro Asp Gln Arg Pro Asp Pro Gly Glu Arg Met Val Pro Glu Val Arg Val Leu Ser Ser Leu Leu Gly Leu 100 105

Ala Leu Leu Trp Phe Pro Leu Asp Ser His Ala Arg Ala Arg Pro Asp 115 120 125

Met Phe Cys Leu Phe His Gly Lys Arg Tyr Ser Pro Gly Glu Ser Trp

His Pro Tyr Leu Glu Pro Gln Gly Leu Met Tyr Cys Leu Arg Cys Thr

Cys Ser Glu Gly Ala His Val Ser Cys Tyr Arg Leu His Cys Pro Pro

135

150

165

145

170

Val His Cys Pro Gln Pro Val Thr Glu Pro Gln Gln Cys Cys Pro Lys 180 Cys Val Glu Pro His Thr Pro Ser Gly Leu Arg Ala Pro Pro Lys Ser 200 Cys Gln His Asn Gly Thr Met Tyr Gln His Gly Glu Ile Phe Ser Ala 215 His Glu Leu Phe Pro Ser Arq Leu Pro Asn Gln Cys Val Leu Cys Ser 225 230 Cys Thr Glu Gly Gln Ile Tyr Cys Gly Leu Thr Thr Cys Pro Glu Pro 250 Gly Cys Pro Ala Pro Leu Pro Leu Pro Asp Ser Cys Cys Gln Ala Cys Lys Gly Glu Ala Ser Glu Gln Ser Asp Glu Glu Asp Ser Val Gln Ser 280 Leu His Gly Val Arg His Pro Gln Asp Pro Cys Ser Ser Asp Ala Gly 300 295 Arg Lys Arg Gly Pro Gly Thr Pro Ala Pro Thr Gly Leu Ser Ala Pro 310 315 Leu Ser Phe Ile Pro Arg His Phe Arg Pro Lys Gly Ala Gly Ser Thr 330 325 Thr Val Lys Ile Val Leu Lys Glu Lys His Lys Lys Ala Cys Val His Gly Gly Lys Thr Tyr Ser His Gly Glu Val Trp His Pro Ala Phe Arg Ala Phe Gly Pro Leu Pro Cys Ile Leu Cys Thr Cys Glu Asp Gly Arg 375 Gln Asp Cys Gln Arg Val Thr Cys Pro Thr Glu Tyr Pro Cys Arg His 395 Pro Glu Lys Val Ala Gly Lys Cys Cys Lys Ile Cys Pro Glu Asp Lys 405 410 Ala Asp Pro Gly His Ser Glu Ile Ser Ser Thr Arg Cys Pro Lys Ala 425 Pro Gly Arg Val Leu Val His Thr Ser Val Ser Pro Ser Pro Asp Asn 435 440 445 Leu Arg Arg Phe Ala Leu Glu His Glu Ala Ser Asp Leu Val Glu Ile 450 Tyr Leu Trp Lys Leu Val Lys Asp Glu Glu Thr Glu Ala Gln Arg Gly 470 475

Glu Val Pro Gly Pro Arg Pro His Ser Gln Asn Leu Pro Leu Asp Ser 485 490 495

Asp Gln Glu Ser Gln Glu Ala Arg Leu Pro Glu Arg Gly Thr Ala Leu 500 505 510

Pro Thr Ala Arg Trp Pro Pro Arg Arg Ser Leu Glu Arg Leu Pro Ser 515 520 525

Pro Asp Pro Gly Ala Glu Gly His Gly Gln Ser Arg Gln Ser Asp Gln 530 535 540

Asp Ile Thr Lys Thr 545

<210> 18

<211> 392

<212> PRT

<213> Homo sapiens

<400> 18

Ile Ser Ser Trp Gly Gln Met Gln Asn His Gln Lys Ser Gly Leu Val
1 5 10 15

Asn Phe Ser Lys Asp Ser His Glu Thr Ser Phe Ser Ser Ser Cys
20 25 30

Pro Ser Pro Thr Ala Glu Pro His Thr Pro Ser Gly Leu Arg Ala Pro 35 40 45

Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His Gly Glu Ile
50 55 60 -

Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro Asn Gln Cys Val 65 70 75 80

Leu Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys Gly Leu Thr Thr Cys
85 90 95

Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro Leu Pro Asp Ser Cys Cys 100 105 110

Gln Ala Cys Lys Asp Glu Ala Ser Glu Gln Ser Asp Glu Glu Asp Ser 115 120 125

Val Gln Ser Leu His Gly Val Arg His Pro Gln Asp Pro Cys Ser Ser 130 135 140

Asp Ala Gly Arg Lys Arg Gly Pro Gly Thr Pro Ala Pro Thr Gly Leu 145 150 155 160

Ser Ala Pro Leu Ser Phe Ile Pro Arg His Phe Arg Pro Lys Gly Ala 165 170 175

Gly Ser Thr Thr Val Lys Ile Val Leu Lys Glu Lys His Lys Lys Ala

180 185 190

Cys Val His Gly Gly Lys Thr Tyr Ser His Gly Glu Val Trp His Pro 195 200 205

Ala Phe Arg Ala Phe Gly Pro Leu Pro Cys Ile Leu Cys Thr Cys Glu 210 215 220

Asp Gly Arg Gln Asp Cys Gln Arg Val Thr Cys Pro Thr Glu Tyr Pro 225 230 235 240

Cys Arg His Pro Glu Lys Val Ala Gly Lys Cys Cys Lys Ile Cys Pro 245 250 255

Glu Asp Lys Ala Asp Pro Gly His Ser Glu Ile Ser Ser Thr Arg Cys 260 265 270

Pro Lys Ala Pro Gly Arg Val Leu Val His Thr Ser Val Ser Pro Ser 275 280 285

Pro Asp Asn Leu Arg Arg Phe Ala Leu Glu His Glu Ala Ser Asp Leu 290 295 300

Gln Arg Gly Glu Val Pro Gly Pro Arg Pro His Ser Gln Asn Leu Pro 325 330 335

Leu Asp Ser Asp Gln Glu Ser Gln Glu Ala Arg Leu Pro Glu Arg Gly 340 345 350

Thr Ala Leu Pro Thr Ala Arg Trp Pro Pro Arg Arg Ser Leu Glu Arg 355 360 365

Leu Pro Ser Pro Asp Pro Gly Ala Glu Gly His Gly Gln Ser Arg Gln 370 375 380

Ser Asp Gln Asp Ile Thr Lys Thr 385 390

<210> 19

<211> 443

<212> PRT

<213> Homo sapiens

<400> 19

Asp Arg Val Phe Gly Leu Glu Pro Pro Gly Thr Asn Met Ala Leu Val 1 5 15

Gly Leu Pro Gly Pro Asp Met Phe Cys Leu Phe His Gly Lys Arg Tyr
20 25 30

Ser Pro Gly Glu Ser Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met 35 40 45

Tyr Cys Leu Arg Cys Thr Cys Ser Glu Gly Ala His Val Ser Cys Tyr Arg Leu His Cys Pro Pro Val His Cys Pro Gln Pro Val Thr Glu Pro Gln Gln Cys Cys Pro Lys Cys Val Glu Pro His Thr Pro Ser Gly Leu Arq Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His 105 Gly Glu Ile Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro Asn 120 Gln Cys Val Leu Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys Gly Leu 135 Thr Thr Cys Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro Leu Pro Asp 155 150 Ser Cys Cys Gln Ala Cys Lys Asp Glu Ala Ser Glu Gln Ser Asp Glu Glu Asp Ser Val Gln Ser Leu His Gly Val Arg His Pro Gln Asp Pro 185 Cys Ser Ser Asp Ala Gly Arg Lys Arg Gly Pro Gly Thr Pro Ala Pro 200 Thr Gly Leu Ser Ala Pro Leu Ser Phe Ile Pro Arg His Phe Arg Pro 215 Lys Gly Ala Gly Ser Thr Thr Val Lys Ile Val Leu Lys Glu Lys His 230 235 Lys Lys Ala Cys Val His Gly Gly Lys Thr Tyr Ser His Gly Glu Val Trp His Pro Ala Phe Arg Ala Phe Gly Pro Leu Pro Cys Ile Leu Cys Thr Cys Glu Asp Gly Arg Gln Asp Cys Gln Arg Val Thr Cys Pro Thr Glu Tyr Pro Cys Arg His Pro Glu Lys Val Ala Gly Lys Cys Cys Lys 295 Ile Cys Pro Glu Asp Lys Ala Asp Pro Gly His Ser Glu Ile Ser Ser 310 315 Thr Arg Cys Pro Lys Ala Pro Gly Arg Val Leu Val His Thr Ser Val 325 330 335 Ser Pro Ser Pro Asp Asn Leu Arg Arg Phe Ala Leu Glu His Glu Ala 340 345

Ser Asp Leu Val Glu Ile Tyr Leu Trp Lys Leu Val Lys Asp Glu Glu 355 360 365

Thr Glu Ala Gln Arg Gly Glu Val Pro Gly Pro Arg Pro His Ser Gln 370 375 380

Asn Leu Pro Leu Asp Ser Asp Gln Glu Ser Gln Glu Ala Arg Leu Pro 385 390 395 400

Glu Arg Gly Thr Ala Leu Pro Thr Ala Arg Trp Pro Pro Arg Arg Ser 405 410 415

Leu Glu Arg Leu Pro Ser Pro Asp Pro Gly Ala Glu Gly His Gly Gln 420 425 430

Ser Arg Gln Ser Asp Gln Asp Ile Thr Lys Thr 435 440

<210> 20

<211> 378

<212> PRT

<213> Homo sapiens

<400> 20

Asp Arg Val Phe Gly Leu Glu Pro Pro Gly Thr Asn Met Ala Leu Val 1 5 10 15

Gly Leu Pro Gly Pro Asp Met Phe Cys Leu Phe His Gly Lys Arg Tyr
20 25 30

Ser Pro Gly Glu Ser Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met 35 40 45

Tyr Cys Leu Arg Cys Thr Cys Ser Glu Gly Ala His Val Ser Cys Tyr 50 55 60

Arg Leu His Cys Pro Pro Val His Cys Pro Gln Pro Val Thr Glu Pro 65 70 75 80

Gln Gln Cys Cys Pro Lys Cys Val Glu Pro His Thr Pro Ser Gly Leu 85 90 95

Arg Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His 100 105 110

Gly Glu Ile Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro Asn 115 120 125

Gln Cys Val Leu Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys Gly Leu 130 135 140

Thr Thr Cys Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro Leu Pro Asp 145 150 155 160

Ser Cys Cys Gln Ala Cys Lys Asp Glu Ala Ser Glu Gln Ser Asp Glu 165 170 175

Glu Asp Ser Val Gln Ser Leu His Gly Val Arg His Pro Gln Asp Pro 180 185 190

Cys Ser Ser Asp Ala Gly Arg Lys Arg Gly Pro Gly Thr Pro Ala Pro 195 200 205

Thr Gly Leu Ser Ala Pro Leu Ser Phe Ile Pro Arg His Phe Arg Pro 210 215 220

Lys Gly Ala Gly Ser Thr Thr Val Lys Ile Val Leu Lys Glu Lys His 225 230 235 240

Lys Lys Glu Asp Lys Ala Asp Pro Gly His Ser Glu Ile Ser Ser Thr 245 250 255

Arg Cys Pro Lys Ala Pro Gly Arg Val Leu Val His Thr Ser Val Ser 260 265 270

Pro Ser Pro Asp Asn Leu Arg Arg Phe Ala Leu Glu His Glu Ala Ser 275 280 285

Asp Leu Val Glu Ile Tyr Leu Trp Lys Leu Val Lys Asp Glu Glu Thr 290 295 300

Glu Ala Gln Arg Gly Glu Val Pro Gly Pro Arg Pro His Ser Gln Asn 305 310 315 320

Leu Pro Leu Asp Ser Asp Gln Glu Ser Gln Glu Ala Arg Leu Pro Glu
325 330 335

Arg Gly Thr Ala Leu Pro Thr Ala Arg Trp Pro Pro Arg Arg Ser Leu 340 345 350

Glu Arg Leu Pro Ser Pro Asp Pro Gly Ala Glu Gly His Gly Gln Ser 355 360 365

Arg Gln Ser Asp Gln Asp Ile Thr Lys Thr 370 375

<210> 21

<211> 356

<212> PRT

<213> Homo sapiens

<400> 21

Asp Arg Val Phe Gly Leu Glu Pro Pro Gly Thr Asn Met Ala Leu Val 1 5 10 15

Gly Leu Pro Gly Pro Asp Met Phe Cys Leu Phe His Gly Lys Arg Tyr
20 25 30

Ser Pro Gly Glu Ser Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met 35 40 45

Tyr Cys Leu Arg Cys Thr Cys Ser Glu Gly Ala His Val Ser Cys Tyr

Arg Leu His Cys Pro Pro Val His Cys Pro Gln Pro Val Thr Glu Pro 80

Gln Gln Cys Cys Pro Lys Cys Val Glu Pro 90 Thr Pro Ser Gly Leu 95

Arg Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His 110

Gly Glu Ile Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro Asn Gln Cys Val Leu Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys Gly Leu

130 135 140

Thr Thr Cys Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro Leu Pro Asp 145 150 155 160

Ser Cys Cys Gln Ala Cys Lys Asp Glu Ala Ser Glu Gln Ser Asp Glu 165 170 175

Glu Asp Ser Val Gln Ser Leu His Gly Val Arg His Pro Gln Asp Pro 180 185 190

Cys Ser Ser Asp Ala Gly Arg Lys Arg Gly Pro Gly Thr Pro Ala Pro 195 200 205

Thr Gly Leu Ser Ala Pro Leu Ser Phe Ile Pro Arg His Phe Arg Pro 210 215 220

Lys Gly Ala Gly Ser Thr Thr Val Lys Ile Val Leu Lys Glu Lys His 225 230 235 240

Lys Lys Glu Asp Lys Ala Asp Pro Gly His Ser Glu Ile Ser Ser Thr $245 \hspace{1cm} 250 \hspace{1cm} 255$

Arg Cys Pro Lys Ala Pro Gly Arg Val Leu Val His Thr Ser Val Ser 260 265 270

Pro Ser Pro Asp Asn Leu Arg Arg Phe Ala Leu Glu His Glu Ala Ser 275 280 285

Asp Leu Val Glu Ile Tyr Leu Trp Lys Leu Val Lys Gly Ile Phe His 290 295 300

Leu Thr Gln Ile Lys Lys Val Arg Lys Gln Asp Phe Gln Lys Glu Ala 305 310 315 320

Gln His Phe Arg Leu Leu Ala Gly Pro His Glu Gly His Trp Asn Val 325 330 335

Phe Leu Ala Gln Thr Leu Glu Leu Lys Val Thr Ala Ser Pro Asp Lys 340 345 350

Val Thr Lys Thr

355

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<210> 22 <211> 397 <212> PRT <213> Mouse <220> <221> UNSURE <222> (1)..(397) <223> Xaa = any amino acid, unknown or other <400> 22 Phe Leu Tyr Ser Ser His Thr Ala Leu Pro Thr His Thr Ser Pro Lys Val Xaa Glu Ser Pro Gly Gly Trp Leu Ala Lys Ser Leu Ser Val Xaa Leu Leu Ile Ser Leu Arg Ile Ser Thr Ser Pro Thr Arg Phe Cys Val Glu Pro Val Leu Ser Val Cys Leu Ser Val Cys Leu Ser Val Cys Leu 55 50 Ser Ala Cys Leu Ser Leu Ser Val Ser Val Cys Leu Cys Leu Ser Val Cys Leu Cys Leu Ser Leu Ser Leu Cys Leu Cys Leu Cys Leu Cys Leu Cys Leu Ser Leu Ser Leu Arg Ser Pro Leu Ala Phe Ser Ser Arg Arg Leu Met Gln Pro Gly Trp Cys Ser Gln Leu Trp Pro Ile Pro Gln Thr Ala Pro His Pro Ala Cys Cys Ser Gln Arg His Ser Gln Asp 130 135 140 Pro Cys Ser Glu Arg Arg Gly Pro Ser Thr Pro Ala Pro Thr Ser Leu 150 Ser Ser Pro Leu Gly Phe Ile Xaa Arg His Phe Gln Ser Val Gly Met 165 170 Gly Ser Thr Thr Ile Lys Ile Ile Leu Lys Glu Lys His Lys Lys Ala 180 Cys Thr His Asn Gly Lys Thr Tyr Ser His Gly Glu Val Trp His Pro 200 Thr Val Leu Ser Phe Gly Pro Met Pro Cys Ile Leu Cys Thr Cys Ile 215 Asp Gly Tyr Gln Asp Cys His Arg Val Thr Cys Pro Thr Gln Tyr Pro

235 225 230 240 Cys Ser Gln Pro Lys Lys Val Ala Gly Lys Cys Cys Lys Ile Cys Pro 245 Glu Asp Glu Ala Glu Asp Asp His Ser Glu Val Ile Ser Thr Arg Cys Pro Lys Val Pro Gly Gln Phe Gln Val Tyr Thr Leu Ala Ser Pro Ser Pro Asp Ser Leu His Arg Phe Val Leu Glu His Glu Ala Ser Asp Gln Val Glu Met Tyr Ile Trp Lys Leu Val Lys Gly Ile Tyr His Leu Val Gln Ile Lys Arg Val Arg Lys Gln Asp Phe Gln Lys Glu Val Gln Asn 330 Phe Arg Leu Leu Thr Gly Thr His Glu Gly Tyr Trp Thr Val Phe Leu 345 Ala Gln Ile Pro Glu Leu Lys Val Thr Ala Ser Pro Asp Lys Val Thr 365 360 Lys Thr Leu Gln Gly Pro Lys Glu Leu Gln Ile Arg Val Leu Leu Val Leu Leu Tyr Ile Asn Lys Glu Val Ala Leu Pro Phe 390 <210> 23 <211> 21 <212> DNA <213> Artificial Sequence <220> <223> DNA sense primer <400> 23 21 gaaagcctgt gtgcatggcg g <210> 24 <211> 23 <212> DNA <213> Artificial Sequence

23

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<400> 24

DNA anti-sense primer

agctcatatc tgcaactgtt agg